



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,916	04/15/2004	Steven R. Knight		7346
7590	06/02/2005		EXAMINER	
Christopher H. Hunter			SAVAGE, MATTHEW O	
PARKER-HANNIFIN CORPORATION				
6035 Parkland Boulevard			ART UNIT	PAPER NUMBER
Cleveland, OH 44124-4141			1724	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/824,916	KNIGHT, STEVEN R.
	<b>Examiner</b>	<b>Art Unit</b>
	Matthew O. Savage	1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 March 2005.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-48 is/are pending in the application.

4a) Of the above claim(s) 5 and 29-48 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-5 and 7-28 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4-15-04.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

Applicant's election without traverse of group I and species 2 in the reply filed on 3-23-05 and the telephone interview conducted on 5-31-05 is acknowledged.

Claim 18 is objected to because of the following informalities: concerning lines 2 and 5 of claim 18, it is suggested that "medial" be changed to --media--. Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, and 7-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bies et al in view of Jiang et al.

With respect to claim 1, Bies et al disclose a filter element 10 (see FIG. 4) having a ring of filter media 14 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps 32 fixed to said first and second ends, respectively, of the filter media, the second end cap 32 (see FIG. 2) having an annular end cap portion fixed to the second end of the filter media, the second end cap has a valve actuating portion including an axially-extending cylindrical portion (e.g., portion 28 that holds seal 30) connected to the annular end cap portion and circumscribing the inner diameter of the annular end cap portion and an annular base (e.g., adjacent upper ends of parts 24) connected to the cylindrical portion

and extending radially inward from the cylindrical portion to define a first central opening, the base having a surface facing inwardly toward the first end, and a plurality of keys 24 supported by and extending away from the valve-actuating portion in an axially inward direction from the base toward the first end cap, each of the keys having a free engaging portion (e.g., a lower end of parts 24 shown in FIG. 2) positioned radially inward to an inner surface of the cylindrical portion and axially spaced away from the annular base. Bies et al fail to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Bies et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the filter media to the end cap.

With respect to claim 2, Bies et al disclose each of the keys 24 as having a step including a first edge portion (e.g., adjacent a base) terminating axially a first distance from the annular base and radially inward a first distance from the cylindrical portion, and a second edge portion 26 terminating axially a second distance from the annular base and radially inward a second distance from the cylindrical portion.

As to claim 3, Bies et al disclose the keys as each being thin and flat strips connected to the valve actuating portion.

Concerning claim 4, Bies et al disclose each of the keys as being connected directly to both the cylindrical portion and the annular base, and the keys extending radially inward from the cylindrical portion to terminate radially outward from the first central opening and extend axially away from the base (see FIG. 2).

With respect to claim 5, Bies et al disclose the annular end cap portion, cylindrical portion, base, and keys as being unitary since they are formed by injection molding (see lines 13-19 of col. 6).

With respect to claim 7, Bies et al disclose a filter element 10 (see FIG. 4) having a ring of filter media 14 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps 32 fixed to said first and second ends, respectively, of the filter media, the second end cap 32 (see FIG. 2) having an annular end cap portion fixed to the second end of the filter media and a valve actuating portion including a cylindrical portion (e.g., portion 28 that holds seal 30) connected at one end to and circumscribing the inner diameter of the annular end cap portion and extending inward into the central cavity from the second end cap toward the first end cap and terminating prior to the first end cap, an annular base (e.g., adjacent upper ends of parts 24) connected to the cylindrical portion and extending radially inward from the cylindrical portion to define a first central opening capable of receiving a pipe, the base having a surface facing inwardly toward the first end, and a plurality of keys 24 supported at one end by the surface of the base (see FIG. 1) and projecting axially outward from the surface of the annular base toward the first end cap and terminating prior to the first end cap, the keys having a free engaging

Art Unit: 1724

end (e.g., the lower end of parts 24 shown in FIG. 2) radially inward of the inner surface of the cylindrical portion and axially spaced outwardly from the annular base. Bies et al fail to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Bies et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the filter media to the end cap.

Concerning claim 8, Bies et al disclose the first central opening as being internal to the central cavity (see FIG. 2).

Regarding claim 9, Bies et al disclose the free engaging end of each key as being an edge (see FIGS. 1 and 2).

As to claim 10, Bies et al disclose the edges of the keys as facing the first end cap (see FIG. 2).

Concerning claim 11, Bies et al disclose the free engaging ends of the keys as being internal to the central cavity and facing towards the first end cap (see FIGS. 2 and 4).

Regarding claim 12, Bies et al disclose the keys as being fixed to the annular base since the base and keys are formed by an injection molding process (see FIG. 2 and lines 13-19 of col. 6).

Regarding claim 13, Bies et al disclose the keys as being unitary with base since the base and keys are formed by an injection molding process (see FIG. 2 and lines 13-19 of col. 6).

With respect to claim 14, Bies et al disclose the keys as having a width projecting radially inward from the cylindrical portion (e.g., the portion of part 24 positioned above bevel 26 shown in FIG. 2) to an inner edge in bounding relation to the first central opening.

Regarding claim 15, Bies et al disclose the keys as being fixed to the cylindrical portion 28 since the cylindrical portion and keys are formed by an injection molding process (see FIG. 2 and lines 13-19 of col. 6).

As to claim 16, Bies et al fail to specify the cylindrical portion as being unitary with the annular end cap portion, however, such a modification is considered obvious in view of *In re Larson* (see *In re Larson*, 144 USPQ 347 (CCPA 1965)).

Concerning claim 17, Bies et al disclose the keys as being axially elongated (see FIG. 2).

With respect to claim 18, Bies et al disclose a filter element 10 (see FIG. 4) having a ring of filter media 14 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps 32 fixed to said first and second ends, respectively, of the filter media, the second end cap 32 (see FIG. 2) having an annular end cap portion fixed to the second end of the filter media and a valve actuating portion a cylindrical portion (e.g., portion 28 that holds seal 30) connected at one end to and circumscribing the inner diameter of the

annular end cap portion and extending inward into the central cavity from the second end cap toward the first end cap and terminating prior to the first end cap, an annular base (e.g., adjacent upper ends of parts 24) connected to the cylindrical portion and extending radially inward from the cylindrical portion to define a first central opening capable of receiving a pipe, the base having a surface facing inwardly toward the first end, and a plurality of discrete keys 24 supported by the surface of the base of the cylindrical portion in outwardly bonding relation to the first central opening (e.g., the portion above bevels 26), the keys having a free engaging end (e.g., the lower end of parts 24 shown in FIG. 2) facing the first end cap radially inward of an inner surface of the cylindrical portion and axially spaced outwardly from the annular base. Bies et al fail to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Bies et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the filter media to the end cap.

Concerning claim 19, Bies et al disclose the first central opening as being internal to the central cavity (see FIG. 2).

Regarding claim 20, Bies et al disclose the free engaging end of each key as being an edge (see FIGS. 1 and 2).

Concerning claim 21, Bies et al disclose the free engaging ends of the keys as being internal to the central cavity and facing towards the first end cap (see FIGS. 2 and 4).

Regarding claim 22, Bies et al disclose the keys as being fixed to the annular base since the base and keys are formed by an injection molding process (see FIG. 2 and lines 13-19 of col. 6).

Regarding claim 23, Bies et al disclose the keys as being unitary with cylindrical portion since the cylindrical portion and keys are formed by an injection molding process (see FIG. 2 and lines 13-19 of col. 6).

As to claim 24, Bies et al fail to specify the cylindrical portion as being unitary with the annular end cap portion, however, such a modification is considered obvious in view of *In re Larson* (see *In re Larson*, 144 USPQ 347 (CCPA 1965)).

Concerning claim 25, Bies et al disclose the keys as being axially elongated (see FIG. 2).

As to claim 26, Bies et al disclose the first end cap as being annular and imperforate (see FIG. 4).

Regarding claim 27, Bies et al disclose the cylindrical portion 28 and base as being imperforate (see FIG. 2).

Claims 1, 3, 5, and 7-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al in view of Jiang et al.

With respect to claim 1, Brown et al disclose a filter element (see FIG. 3) having a ring of filter media 22 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps fixed to said first and second ends, respectively, of the filter media, the second end cap having an annular end cap portion fixed to the second end of the filter media, the second end cap has a valve actuating portion including an axially-extending tubular portion (e.g., the tubular wall adjacent an inner periphery of the media of the lower end cap) connected to the annular end cap portion and circumscribing the inner diameter of the annular end cap portion and an annular base connected to the cylindrical portion and extending radially inward from the cylindrical portion to define a first central opening, the base having a surface facing inwardly toward the first end, and a plurality of keys (e.g., lifting valve member 36) supported by and extending away from the valve-actuating portion in an axially inward direction from the base toward the first end cap, each of the keys having a free engaging portion (e.g., upper free ends) positioned radially inward to an inner surface of the cylindrical portion and axially spaced away from the annular base. Brown et al fail to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Bies et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the

filter media to the end cap. Brown et al fail to specify the valve actuating portion as having a cylindrical shape, however, the selection of such a shape would have been nothing more than one of numerous shape configurations obvious to one skilled in the art to connect the annular portion to the base portion (see *In re Dailey*, USPQ 47 (CCPA 1976).

As to claim 3, Brown et al disclose the keys as each being thin and flat strips connected to the valve actuating portion.

With respect to claim 5, Brown et al disclose the annular end cap portion, cylindrical portion, base, and keys as being unitary (see FIG. 3).

With respect to claim 7, Brown et al disclose a filter element (see FIG. 3) having a ring of filter media 22 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps fixed to said first and second ends, respectively, of the filter media, the second end cap having an annular end cap portion fixed to the second end of the filter media and a valve actuating portion including a tubular portion (e.g., the portion adjacent an inner periphery of the filter media of the lower end cap) connected at one end to and circumscribing the inner diameter of the annular end cap portion and extending inward into the central cavity from the second end cap toward the first end cap and terminating prior to the first end cap, an annular base (e.g., at an upper end of the tubular portion) connected to the cylindrical portion and extending radially inward from the cylindrical portion to define a first central opening capable of receiving a pipe, the base having a surface facing inwardly toward the first end, and a plurality of keys supported at one end

by the surface of the base (e.g., contacting valve member 36) and projecting axially outward from the surface of the annular base toward the first end cap and terminating prior to the first end cap, the keys having a free engaging end radially inward of the inner surface of the cylindrical portion and axially spaced outwardly from the annular base. Jiang et al fails to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Bies et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the filter media to the end cap. Brown et al fail to specify the valve actuating portion as having a cylindrical shape, however, the selection of such a shape would have been nothing more than one of numerous shape configurations obvious to one skilled in the art to connect the annular portion to the base portion (see *In re Dailey*, USPQ 47 (CCPA 1976)).

Concerning claim 8, Brown et al disclose the first central opening as being internal to the central cavity (see FIG. 3).

Regarding claim 9, Brown et al disclose the free engaging end of each key as being an edge (see FIG. 3).

As to claim 10, Brown et al disclose the edges of the keys as facing the first end cap (see FIG. 3).

Concerning claim 11, Brown et al disclose the free engaging ends of the keys as being internal to the central cavity and facing towards the first end cap (see FIG. 3).

Regarding claim 12, Brown et al disclose the keys as being fixed to the annular base (see FIG. 3).

Regarding claim 13, Brown et al disclose the keys as being unitary with base (see FIG. 3).

With respect to claim 14, Brown et al disclose the keys as having a width projecting radially inward from the cylindrical portion to an inner edge in bounding relation to the first central opening (see FIG. 3).

Regarding claim 15, Brown et al disclose the keys as being fixed to the cylindrical portion (e.g., via the base which is fixed to the cylindrical portion).

As to claim 16, Brown et al disclose the cylindrical portion as being unitary with the annular end cap portion.

Concerning claim 17, Brown et al disclose the keys as being axially elongated (see FIG. 2).

With respect to claim 18, Brown et al disclose a filter element (see FIG. 4) having a ring of filter media 22 defining a central cavity and circumscribing a central axis, the ring of filter media having a first end and a second end, first and second end caps fixed to said first and second ends, respectively, of the filter media, the second end cap having an annular end cap portion fixed to the second end of the filter media and a valve actuating portion including a tubular portion (e.g., the portion adjacent an interior surface of the filter media) connected at one end to and circumscribing the inner

diameter of the annular end cap portion and extending inward into the central cavity from the second end cap toward the first end cap and terminating prior to the first end cap, an annular base (e.g., at a top of the tubular portion) connected to the cylindrical portion and extending radially inward from the cylindrical portion to define a first central opening capable of receiving a pipe, the base having a surface facing inwardly toward the first end, and a plurality of discrete keys (e.g., contacting part 36) supported by the surface of the base of the cylindrical portion in outwardly bonding relation to the first central opening, the keys having a free engaging end (e.g., contacting part 36) facing the first end cap radially inward of an inner surface of the cylindrical portion and axially spaced outwardly from the annular base. Brown et al fails to disclose the second end cap as having an annular end cap portion sealingly bonded to the second end of the filter media. Jiang et al disclosed the concept of bonding an annular end cap portion 41 to an end of a filter media 38 with an adhesive 42 and suggests that such an arrangement sealingly secures the filter media to the end cap. It would have been obvious to have modified the filter of Brown et al so as to have included an annular end cap portion sealingly bonded to an end of the filter media as suggested by Jiang et al in order to sealingly secure the filter media to the end cap. Brown et al fail to specify the valve actuating portion as having a cylindrical shape, however, the selection of such a shape would have been nothing more than one of numerous shape configurations obvious to one skilled in the art to connect the annular portion to the base portion (see *In re Dailey*, USPQ 47 (CCPA 1976).

Concerning claim 19, Brown et al disclose the first central opening as being internal to the central cavity (see FIG. 3).

Regarding claim 20, Brown et al disclose the free engaging end of each key as being an edge (see FIG. 3).

Concerning claim 21, Brown et al disclose the free engaging ends of the keys as being internal to the central cavity and facing towards the first end cap (see FIG. 3).

Regarding claim 22, Brown et al disclose the keys as being fixed to the annular base since the base and keys (see FIG. 3).

Regarding claim 23, Brown et al disclose the keys as being unitary with cylindrical (see FIG. 3).

As to claim 24, Brown et al disclose the cylindrical portion as being unitary with the annular end cap portion (see FIG. 3).

Concerning claim 25, Brown et al disclose the keys as being axially elongated (see FIG. 3).

As to claim 26, Brown et al disclose the first end cap as being annular and imperforate (see FIG. 3).

Regarding claim 27, Brown et al disclose the cylindrical portion 28 and annular base as being imperforate (see FIG. 2).

Concerning claim 28, Brown et al disclose an end wall as enclosing one end of the cylindrical portion to define a cup shaped valve receiving cavity (see FIG. 3).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-45 of U.S. Patent No. 6,495,042. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Instant claims 1 and 2 are broad enough to be read upon the combination of claims 1, 2, 5, and 7 of the patent;

Instant claim 3 is broad enough to be read upon claim 3 of the patent;

Instant claim 4 is broad enough to be read upon claim 7 of the patent.

Claims 7-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-45 of U.S. Patent No. 6,495,042 in view of Brown et al.

Claim 42 of the patent recites all of the details of instant claims 7 with the exception of the cylindrical portion terminating prior to the first end cap. Brown et al disclose an analogous filter element (see FIG. 3) with a tubular portion (e.g., unitary with

end cap and adjacent the inner surface of the media) and suggests that such an arrangement enables the formation of a valve actuator for actuating a valve member 36 of a fuel pump. It would have been obvious to have modified the invention as claimed in claim 42 of the patent so as to have included a tubular portion terminating prior to the first end cap as suggested by Brown et al in order to enable the formation of a valve actuator for actuating a valve member of a fuel pump.

Brown et al disclose the details of instant claims 8-11.

Claim 7 of the patent discloses the details recited in instant claims 12, 13, 15, and 16.

Claim 42 covers instant claims 14 and 17.

The combination of claims 13, 16, and 18 cover all of the details of instant claim 18 with the exception of the cylindrical portion terminating prior to the first end cap. Brown et al disclose an analogous filter element (see FIG. 3) with a tubular portion (e.g., unitary with end cap and adjacent the inner surface of the media) and suggests that such an arrangement enables the formation of a valve actuator for actuating a valve member 36 of a fuel pump. It would have been obvious to have modified the invention as claimed in claim 42 of the patent so as to have included a tubular portion terminating prior to the first end cap as suggested by Brown et al in order to enable the formation of a valve actuator for actuating a valve member of a fuel pump.

Instant claims 19-21, 26, and 27 are covered by Brown et al.

Instant claims 22-24 are covered by claim 18 of the patent.

Instant claim 25 is covered by claim 13 of the patent.

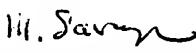
Art Unit: 1724

Instant claim 28 is covered by Brown et al or claim 21 of the patent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Matthew O Savage  
Primary Examiner  
Art Unit 1724

mos  
June 1, 2005